MAHMOOD JASIM

🌐 people.cs.umass.edu/mjasim   ✉ mjasim@cs.umass.edu   🎓 scholar.google.com/mjasim

RESEARCH INTEREST

Research Areas. Human-Computer Interaction, Digital Civics, Information Visualization, Applied Machine Learning, Natural Language Processing, and Social Computing

Research Goals and Interests. My research goal is to design, develop, and evaluate decision-support systems to enable informed data-driven decision-making to address complex socio-technical problems and make more confident personal decisions. I closely work with stakeholders including community members and government officials to explore two major thrusts of research — (1) facilitating sense-making of public-generated data to support informed decision-making and (2) empowering inclusivity in the public engagement process. To that end, I innovate on techniques and methodologies across Human-Computer Interactions (HCI), Information Visualization, Applied Machine Learning, and Social Computing to build decision-support systems to enable informed data-driven decision-making.

EDUCATION

University of Massachusetts Amherst   *2017 - Present*
Ph.D. in Computer Science   *2023 (Expected)*

· Advisor: Narges Mahyar
· Thesis: Data-Driven Decision-Support Systems in Digital Civics

Master's in Computer Science   *2017 - 2021*

· Advisor: Narges Mahyar
· Thesis: Visual Analytics for Sensemaking of Public Input

University of Dhaka   *2007 - 2013*
Master's in Computer Science and Engineering   *2011 - 2013*

· Advisor: Dr. Md. Hasanuzzaman
· Thesis: Hand Gesture Recognition for Bangla Sign Language

Bachelor's in Computer Science and Engineering   *2007 - 2011*

· Advisor: Dr. Mamunur Rashid
· Thesis: Security in Wireless Mesh Networks

AWARDS & ACCOLADES

Best Paper Award, Eurographics Working Group Conference on Data Visualization (EuroVis) - Top 1% out of 178 accepted papers. [C1]	*2022*
Computing for Common Good Fellowship, University of Massachusetts Amherst	*2021*
Best Paper Honorable Mention Award, Designing Interactive Systems (DIS). [C3]	*2021*
Best Paper Award, Computer Supported Cooperative Work and Social Computing (CSCW) - Top 1% out of 1000 papers. [J2]	*2022*
Professor Victor Lesser Graduate Scholarship in Artificial Intelligence, University of Massachusetts Amherst	*2018*
Bachelor of Science Examination Scholarship, University of Dhaka	*2012*
National Education Board Scholarship (High School Certificate), Bangladesh	*2008*
National Education Board Scholarship (Secondary School Certificate), Bangladesh	*2006*

SELECTED PUBLICATIONS

Refereed Journal Publication

[J1] Zhiqiu Jiang, Mashrur Rashik, Kunjal Panchal, **Mahmood Jasim**, Ali Sarvghad, Pari Riahi, Erica Dewitt, Fay Thurber and Narges Mahyar, 2023. CommunityBots: Creating and Evaluating A Multi-Agent Chatbot Platform for Public Input Elicitation. *Proceedings of the ACM on Human-Computer Interaction* (CSCW), 30 pages.

[J2] **Mahmood Jasim**, Pooya Khaloo, Somin Wadhwa, Amy X. Zhang, Ali Sarvghad and Narges Mahyar, 2021. CommunityClick: Capturing and Reporting Community Feedback from Town Halls to Improve Inclusivity. *Proceedings of the ACM on Human-Computer Interaction, 4*(CSCW3), pp.1-32. 🏆 [**Best Paper Award**]

[J3] Brandom Oubre, Jean-Fracois Daneault, Katherine Boyer, Jae Hyun Kim, **Mahmood Jasim**, Paolo Bonato and Sunghoon Ivan Lee, 2020. A Simple Low-cost Wearable Sensor for Long-term Ambulatory Monitoring of Knee Joint Kinematics. *IEEE Transactions on Biomedical Engineering, 67*(12), pp.3483-3490.

[J4] **Mahmood Jasim**, Tao Zhang, and Md. Hasanuzzaman, 2014. A Real-time Computer Vision-based Static and Dynamic Hand Gesture Recognition System. *International Journal of Image and Graphics, 14*(01n02), p.1450006.

Refereed Conference Publications

[C1] Eric. P. Baumer, **Mahmood Jasim**, Ali Sarvghad and Narges Mahyar, 2022. Of Course it's Political! A Critical Inquiry into Underemphasized Dimensions in Civic Text Visualization. *Computer Graphics Forum (EuroVIS), 41*(3), pp. 1- 14. 🏆 [**Best Paper Award**]

[C2] **Mahmood Jasim**, Christopher Collins, Ali Sarvghad and Narges Mahyar, 2022. Supporting Serendipitous Discovery and Balanced Analysis of Online Product Reviews with Interaction-Driven Metrics and Bias-Mitigating Suggestions. In *CHI Conference on Human Factors in Computing Systems* (pp. 1-24).

[C3] **Mahmood Jasim**, Enamul Hoque, Ali Sarvghad and Narges Mahyar, 2021. CommunityPulse: Facilitating Community Input Analysis by Surfacing Hidden Insights, Reflections, and Priorities. In *Designing Interactive Systems Conference* (pp. 846-863). 🎗 [**Best Paper Honorable Mention Award**]

[C4] Carolina Aragón, **Mahmood Jasim** and Narges Mahyar, 2021. RisingEMOTIONS: Bridging Art and Technology to Visualize Public's Emotions about Climate Change. In *Creativity and Cognition* (pp. 1-10).

[C5] **Mahmood Jasim**, Ali Sarvghad, Enamul Hoque, and Narges Mahyar, 2020. Towards Understanding Desiderata for Large-Scale Civic Input Analysis. *In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1-8).

Abstract, Workshop, Demo, and Other Publications

[O1] Narges Mahyar, **Mahmood Jasim** and Ali Sarvghad, 2020. Designing Technology for Socio-technical Problems: Challenges and Considerations. *IEEE Computer Graphics and Applications, 40*(06), pp.76-87.

[O2] **Mahmood Jasim**, Ali Sarvghad, Enamul Hoque and Narges Mahyar, 2020. Towards Understanding Desiderata for Large-Scale Civic Input Analysis. *In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems*, (pp. 1-8).

[O3] Tamanna Motahar, **Mahmood Jasim**, Syed I. Ahmed and Narges Mahyar, 2020. Exploring how international graduate students in the US Seek support. *In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1-8).

[O4] **Mahmood Jasim**, Amy X. Zhang, Ali Sarvghad and Narges Mahyar, 2020. Inclusivity in Town Halls: Challenges, Paradigm Shift, and Opportunities. *Civic Technologies Workshop, in conjunction with CSCW 2020*, (pp. 1-5).

Publications in Submission (The venue is omitted for anonymity)

[S1] Mashrur Rashik, **Mahmood Jasim**, Zhiqiu Jiang, Ali Sarvghad and Narges Mahyar, 2022. Mapping the Current State of Conversational Agent's Avatar Design. 22 pages.

[S2] Jeongheon Song, **Mahmood Jasim**, Dawn Roberts and Hee-Tae Jung, 2022. Exploring Competency and Engagement in Movement-Based Game Control Interface in Serious Games for Children with ADHD. 22 pages.

[S3] Sheshera Mysore, **Mahmood Jasim**, Haoru Song, Sarah Akbar, Andre Kenneth Chase Randall and Narges Mahyar, 2022. Exploring how Data Scientists Review Scholarly Literature. 24 pages.

RESEARCH EXPERIENCE

Research Assistant   *2018 - Present*
Human-Computer Interaction & Visualization (HCI-VIS) Lab, UMass Amherst

· Design and development of decision-support systems in Digital Civics
· Visual analysis and sensemaking of large-scale online public-generated data

Research Assistant   *2017 - 2018*
Advanced Human & Health Analytics (AHHA) Lab, UMass Amherst

· Handwriting recognition and reconstruction using wrist-worn sensor
· Long-term monitoring of knee joint angle for patients with osteoarthritis

Research Assistant   *2011 - 2017*
Robotics Laboratory (RoboLab), University of Dhaka

· Human activity recognition
· Gesture recognition for virtual object manipulation

Research Software Engineer   *2011 - 2013*
TigerIT Bangladesh Limited

· Face recognition
· Biometric signal detection and recognition

TEACHING EXPERIENCE

Assistant Professor   *2023 - Present*
Division of Computer Science and Engineering, Louisiana State University

Instructor   *2021*
Manning College of Information and Computer Sciences, UMass Amherst

· COMPSCI-325: Introduction to Human-Computer Interaction (100 students)

Teaching Faculty   *2015 - 2017*
Computer Science and Engineering, University of Dhaka

· CSE-3201: Operating Systems (60 - 70 students)
· CSE-4129: Parallel and Distributed Systems (70 - 80 students)

Teaching Faculty   *2014 - 2015*
Computer Science and Engineering, University of Liberal Arts Bangladesh

· CSE-1301: Data Structures (70 - 80 students)
· CSE-3203: Software Engineering (70 - 80 students)

Teaching Assistant   *2018 - Present*
Manning College of Information and Computer Sciences, UMass Amherst

· COMPSCI-690A: Advanced Methods in Human-Computer Interaction (30 - 40 students)
· COMPSCI-325: Introduction to Human-Computer Interaction (80 - 100 students)
· COMPSCI-190F: Frontiers of Data Science (40 students)

ADVISING & MENTORING EXPERIENCE

Graduate Student Mentoring

· **Oscar Youngquist**. Working on improving *SuDoCu* — a system for extractive   *2021 - Present*
document summarization by example.
· **Julian Killingback**. Worked on building early prototypes for *Kokoro* — a social   *2020 - 2021*
media platform that visualizes real-time user connections.
· **Somin Wadhwa**. Worked on the implementation of the feedback-weighted   *2019 - 2020*
summarization module for *CommunityClick* [J2].
· **Aditya Narula**. Worked on early designs and prototypes for *CommunityPulse* [C3]. *2018 - 2019*

Undergraduate Honors Thesis Supervision

· **Abigail Elliot**. Completed her thesis on *Community-Centered Data Collection*   *2021 - 2022*
and Analysis Platform for Public-Generated Data under my co-supervision.
· **Preston Yee**. Completed his thesis on *Social Media Interfaces to Visualize*   *2021 - 2022*
Global Connections and Non-Binary Interactions under my co-supervision.
· **Rinija Raja**. Completed her thesis on *Exploring Emotion-Color Associations*   *2021 - 2022*
for Communicating Information through Visualizations under my co-supervision.

Undergraduate Student Mentoring

· **Ananya Talwar, Hallie Liu, Rachel Gupta**. This interdisciplinary team across   *2022*
computer science, economics, and psychology is Working on designing and
developing an application for mental health support for people with autism.
· **Angelika Ladia, Dylan Landman, Maanas Pari**. These computer science   *2022*
majors are investigating student engagements during virtual classrooms to design
systems for facilitating better communication between students and teachers.
· **Jason Jermany**. Computer science major working on implementing the   *2022*
redesigned *SuDocu* interface to include accessibility and explanation features.
· **Ria Chawla, Tiffany Wang, Yasmeen Mekky**. This interdisciplinary team of   *2021 - 2022*
computer science, informatics, design, and psychology majors worked on designing
and developing *CommunityClick-Virtual* — a community engagement platform.
· **Mumtaz Fatima**. Computer science major working on expanding *Serendyze* — a   *2022*
text analytics system for serendipitous discovery and analysis of product reviews —
to social media discourse and study its potential in combating echo chambers.
· **Arshnoor Chadha**. Computer science major working on an accessible augmented   *2022*
reality platform to facilitate engagement for underrepresented communities.

· **Tahseen Rahman**. Worked on brainstorming and early concept designs for *Kokoro*. 2021
· **Rolando Franqui Nadal**. Worked on data analysis for *CommunityPulse* evaluation. *2020 - 2021*

SERVICE EXPERIENCE

Program Committee Member
· IEEE VIS Short Paper *2022*

Student Voluntter Chair
· ACM Creativity & Cognition *2021*

Student Volunteer
· Computer Supported Cooperative Work and Social Computing (CSCW) *2022*
· Computer Supported Cooperative Work and Social Computing (CSCW) *2020*
· IEEE VIS *2020*

Paper Review
· Computer Supported Cooperative Work and Social Computing (CSCW) *2021 - 2023*
· IEEE Transactions on Visualization and Computer Graphics (TVCG) *2022*
· European Conference on Computer Supported Cooperative Work (ECSCW) *2022*
· IEEE VIS *2019 - 2020*
· ACM CHI Conference on Human Factors in Computing Systems (CHI) *2020 - 2022*
· Late Breaking Work - ACM CHI Conference on Human Factors *2020 - 2021*
  in Computing Systems (CHI LBW)
· International Journal of Human-Computer Studies (IJHCS) *2019*
· ACM Creativity & Cognition *2019*